International Paper (IP) Comments July 12, 2021
Draft EPA HSWA Permit
International Paper Company
1633 South First Street, Wiggins, Mississippi 39577
EPA ID # MSD 980 600 084
Wiggins, Mississippi (the Site)

PERMIT

Section II.A.3. and Appendix A Table A-3. Treatment Area No. 1 and Treatment Area No. 2. A. Soils:

IP acknowledges EPA's Supplemental RCRA Facility Investigation (RFI) requirement that additional soil characterization be conducted at these units. IP will provide EPA with a Supplemental RFI Work Plan within 90 days of the issuance of the Final Permit consistent with Section II.E.1. IP provides the following responses and information and believes the following scope to be appropriate for this requirement.

1. Cancer risks and hazard index (HI) for shallow soil at the Site were calculated in the 2002 RFI using site-specific risk assessment methodology consistent with EPA Guidance. The comparison of shallow soil concentrations to EPA Regional Screening Levels (RSLs) referenced by EPA is only appropriate for determining whether additional, site-specific risk analyses are needed and not for risk management decisions. To provide more appropriate site-specific risk-based thresholds, IP has calculated the site-specific 1×10^{-4} cancer risk and HI = 1 concentrations for industrial workers for Arsenic (As) and Pentachlorophenol (PCP) based on the exposure and toxicity assumptions in the 2002 RFI updated to current EPA human health guidance and using EPA's online site-specific Regional Screening Level calculator.[1] The As and PCP concentration results are listed below.

    - As – 300 mg/kg
    - PCP – 397 mg/kg

    Based on these site-specific screening levels, only one individual soil sample result from EPA's soil sampling in 2017 would pose a localized risk to industrial workers if exposure were to occur: IP02 - 1,500 mg/kg As.[2] The other As results and PCP results are below these site-specific screening levels. Accordingly, IP will propose that the scope of the Supplemental RFI for Treatment Area No. 1 and Treatment Area No. 2 be focused on As in shallow soil in the vicinity of IP02.

    Further, with respect to the limited number of samples referenced by EPA, IP believes the level of effort for the Supplemental RFI for Treatment Areas No. 1 and No. 2 should be limited and focused based on the following factors:

[1] https://epa-prgs.ornl.gov/cgi-bin/chemicals/csl_search using Composite Worker scenario; and RCRA Facility Investigation, International Paper Treated Wood Products Plant, Wiggins, MS, November 12, 2002, specifically including Appendix H – Human Health Risk Assessment.
[2] IP understands that it is not standard practice to evaluate human health risk for remediation purposes under RCRA/HSWA and CERCLA on a sample-by-sample basis. This individual sample comparison is provided as a conservative comparison to facilitate the risk-based goals of this permitting process.

a. There is no complete human exposure pathway to deeper soil at these areas, therefore only shallow soil conditions should be assessed to address this worker risk concern.
b. EPA soil sample IP-02 is located in close proximity to the Treatment Area No. 1 (copper chromated arsenate, CCA, process). Accordingly, this is a potential worst-case location with respect to historical and active CCA use. In consideration of this location and the full set of analytical results from EPA's 2017 soil sampling, other locations beyond the vicinity of IP-02 are not warranted to be included in the Supplemental RFI.
c. Given the consistent process operations prior to and after the 2002 RFI, sufficient analytical data exists in the 2002 RFI to document the absence of worker cancer risks greater than 1×10^{-4} and HI = 1 at other locations at these areas.

IP requests that EPA include in the Permit and Fact Sheet a more detailed acknowledgment that site-wide soil conditions have been thoroughly investigated and assessed and, in some cases, remediated and were deemed to satisfy the requirements of the EPA RCRA/HSWA Permit process at the time of their completion. The soil investigation, assessment and remediation history is summarized below for inclusion in the Permit and Fact Sheet:

- The RFI Report submitted in 2002 documented historical release response actions conducted between 1983 and 1985 associated with SMWU 7, SMWU 8, SWMU 37 and AOC B.
- Wood waste was removed from SWMU 14 in 1986 and 1987, resulting in its No Further Action Status (NFA) in this Permit.
- Wood waste was removed from SWMU 15 in 1986, 1987 and 1990 resulting in its NFA status in this Permit.
- Ash waste was removed from SWMU 16 in 1988 resulting in its NFA status in this Permit.
- Closure of SWMUs 1-10 was completed in 1989 resulting in their post-closure status in this Permit.
- Closure of SWMUs 11-12 was completed in 1991 resulting in their post-closure status in this Permit.
- Confirmatory Sampling and Structural Integrity Testing (CS-SIT) was conducted at 6 SWMUs, 2 AOCs, and Treatment Areas No. 1 and No. 2 in 1997 resulting in the completion of this RCRA Corrective Action requirement.
- Early Removal Actions were completed at SWMU 17 – 20 in 2000-2001 resulting in their NFA status in this Permit.
- RFI soil and/or sediment investigations were conducted in 2002 at SWMU 16, SWMU 37, AOC A, AOC B and at Treatment Area No. 1 and No. 2 in 2002, including a site-specific human health risk assessment (HHRA) documented in Appendix H of the RFI Report.
- A ***Soil Removal Completion Report*** documented the assessment and removal of a waste soil pile identified as SWMU 40 in 2006 and 2007, resulting in its NFA status in this Permit.

- A ***Preliminary Corrective Measures Study*** (CMS) was completed in 2005 including the assessment of soil and/or sediment at SWMU 37, AOC B and Treatment Area No. 1 and No. 2.
- A ***Soil Dioxin Report*** was submitted in 2008 with analytical and risk screening results for SWMU 37 and AOC B.
- A ***Supplemental CMS Report*** was submitted in 2015 including the assessment of soil, sediment and/or surface water at SMWU 37 and AOC B, including ecological risk screening results.
- A ***Supplemental CMS Report*** was submitted in 2017 with additional sediment and surface water assessment and ecological risk screening results.
- An additional supplemental CMS is currently underway under an EPA-approved Work Plan including sediment and biota sampling and assessment and ecological risk assessment.

Section II.A.3. and Appendix A Table A-3. Treatment Area No. 1 and Treatment Area No. 2. B. Groundwater:

IP has completed the agreed upon scope of the ***Data Gap Investigation*** referenced in this section of the Permit and submitted the results to EPA in a report dated August 10, 2020. To date, no review comments or responses have been provided by EPA. EPA should acknowledge the completion of this work in the Permit and complete their review of the results as soon as possible. IP believes that the submitted results further support prior conclusions that stable and decreasing groundwater plume conditions exist at the Site, that no off-site groundwater contaminant migration is occurring, and that no additional groundwater data gap investigations are necessary. IP acknowledges that semiannual groundwater monitoring required in the parallel MDEQ Permit HW-980-600-084 will continue, and to facilitate ongoing confirmation of these conditions, IP would agree to the inclusion of newly installed groundwater monitoring wells WC-56 and WC-57 in this semiannual groundwater monitoring program and is currently sampling these wells during regular monitoring events.

Since EPA has addressed groundwater in this Permit, IP also requests that EPA include a more detailed acknowledgement that site-wide groundwater has been routinely monitored and undergone extensive corrective action consistently satisfying all requirements of the MDEQ Permit. The following groundwater remediation history and success story is provided for inclusion in the Permit and Fact Sheet:

- Groundwater monitoring has been conducted at the Site since 1982, prior to the issuance of the existing EPA HSWA and MDEQ HW Permits under RCRA.
- Groundwater remediation was initially conducted using an on-site extraction & treatment system that operated from 1989-2002. Having successfully reached a point of diminishing returns the system was shut-down and decommissioned.
- A Monitored Natural Attenuation (MNA) demonstration/evaluation using the Ricker Plume Stability Method® was conducted from 2002-2007 resulting in the documentation of a stable and decreasing groundwater plume contained within the Site boundaries and shallow Citronelle Formation hydrogeologic unit. The Ricker Plume Stability Method® continues to be applied to the results of ongoing

groundwater monitoring to confirm the continued natural attenuation of constituents in groundwater.

- A pilot test consisting of Insitu Chemical Oxidation (ISCO) treatment was conducted in 2007 at groundwater hot spots in the area of the Closed Creosote, PCP and Cellon Recovery Ponds (SWMUs 8, 9 and 10).
- Based on the successful results of the pilot test, an additional ***Groundwater Corrective Action Plan*** (CAP) was approved by MDEQ in the May 4, 2010 renewal of MDEQ Permit HW-980-700-084 to expand the ISCO treatment program to other areas of the Site.
- Expanded Active Corrective Action consisting of ISCO treatment at over 90 subsurface injection points was conducted in 2011. Following annual post-ISCO groundwater monitoring at over 60 locations, the CAP was deemed complete by MDEQ in 2016.
- Ongoing semiannual groundwater monitoring and continued application of the Ricker Plume Stability Method®, supplemented by the recent results of the ***Data Gap Investigation*** referenced by EPA, continues to demonstrate a stable and decreasing groundwater plume contained within the Site boundaries and shallow Citronelle Formation hydrogeologic unit.

Section II.A.3. and Appendix A Table A-3. SWMU 38 / AOC C:

The above comments addressing groundwater remediation, monitoring and current conditions should also be referenced with respect to the groundwater data gaps cited by EPA for SWMU 38/AOC C.

Section II.A.5. and Appendix A Table A-5. SWMU 37:

IP notes that the status of SWMU 37 was changed from the prior draft Permit dated July 15, 2020, where its status was listed as "NFA per recommendations in the 2016 Supplemental CMS Report." However, the current draft Permit lists the status of this SWMU as "The 2017 Supplemental CMS Report recommended NFA. This CMS has not been finalized or approved by EPA".

IP requests an explanation for this change from the initial draft Permit.

In addition, it is IP's position that the historical sampling and analysis conducted at this SWMU is distinct from the monitoring being conducted by IP at locations within AOC B Church House Branch for the ongoing Corrective Measures Study (CMS), and is sufficient for the determination of an NFA for the SWMU 37 Drainage Ditches. In support of this position, IP calculated site-specific 1×10^{-4} industrial worker cancer risk and HI = 1 based screening levels for 2,3,7,8-TCDD TEQs based on the shallow soil analysis results previously submitted by IP to EPA for representative Drainage Ditch locations in the ***Soil Dioxin Report*** dated December 23, 2008. Based on these soil data, the EPA online site-specific RSL calculator and site-specific exposure and toxicity assumptions in the 2002 RFI updated to current EPA human health guidance, the calculated site-specific industrial worker risks are:

- 1.76×10^{-5} cancer risk
- HI = 0.5 non-cancer risk

These risk levels are consistent with no unacceptable industrial worker risks for the shallow soil in the SWMU 37 Drainage Ditches.

IP requests that this SMWU be assigned an NFA status in the Permit and be added to Table A-1.

Section II.A.5. and Appendix A Table A-5. AOC B Church House Branch:

The information provided for AOC B Church House Branch is incomplete. Additional prior work conducted by IP should be cited for completeness, including:

- A ***Preliminary Corrective Measures Study*** (CMS) was completed in 2005 including the assessment of soil and/or sediment at SWMU 37, AOC B and Treatment Area No. 1 and No. 2.
- A ***Soil Dioxin Report*** was submitted in 2008 with analytical and risk screening results for SWMU 37 and AOC B.
- A ***Supplemental CMS Report*** was submitted in 2015 including the assessment of soil, sediment and/or surface water at SMWU 37 and AOC B, including ecological risk screening results.
- A ***Supplemental CMS Report*** was submitted in 2017with additional sediment and surface water assessment and ecological risk screening results.
- An additional supplemental CMS is currently underway under an EPA-approved Work Plan including sediment and biota sampling and assessment and ecological risk assessment.

Figure 2 Corrections:

- The City Well should be identified as City Well #3, it is correctly identified on Figure 1.
- The boundaries of the East Wood Waste Landfill SWMU 11 are incorrect, the correct boundaries are shown on Figure 1.
- A corrected **Figure 2** is provided for use by EPA in this Permit.

FACT SHEET

Fact Sheet Sections 1., VI. And VII.

The Fact Sheet provides only a partial and incomplete summary of IP's extensive remediation accomplishments at this Site. IP requests that the groundwater remediation history summary provided above also be included here.

In addition, the Fact Sheet should acknowledge that 24 SMWUs/AOCs require No Further Action (NFA), 10 SWMUs are subject only to Post-Closure Care (PCC), and 1 SMWU was remediated under an Interim Measure (IM).

Also, for completeness, the Pascagoula Formation should be identified as a laterally continuous aquitard with a thickness ranging upwards to 450 feet in Western Mississippi

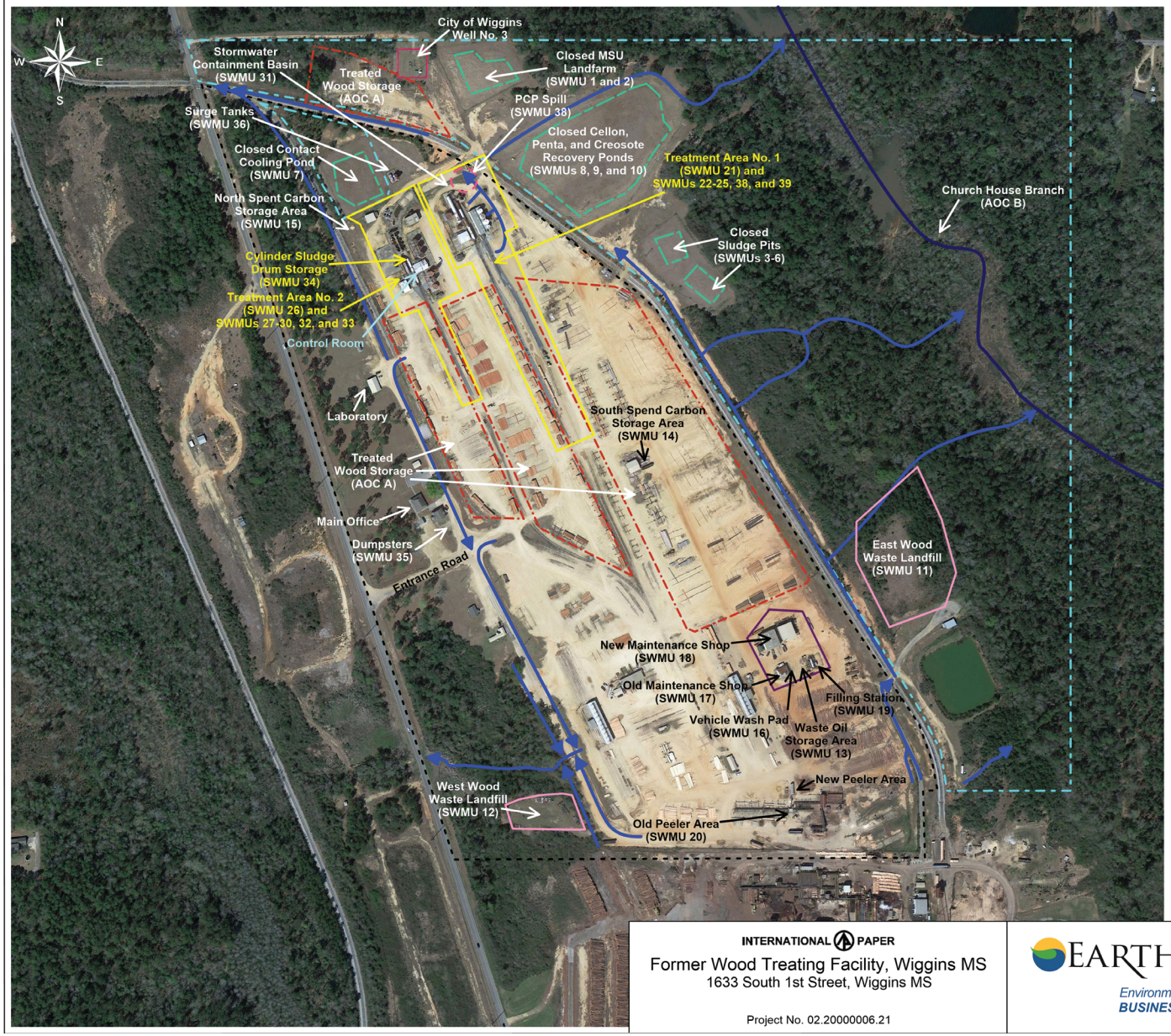
and eastern Louisiana[3] which confines vertical groundwater contamination and movement at this Site to the overlying Citronelle Formation.

Table 2. List of SWMUs and AOCs – SWMU 37

IP notes that the status of SWMU 37 in Fact Sheet Table 2 differs from the initial draft Permit dated July 15, 2020, where its status was listed as “NFA per recommendations in the 2016 Supplemental CMS Report.” However, the current draft Fact Sheet Table 2 lists the status of this SWMU as “CMS - Submitted, but not yet approved by EPA”.

IP requests an explanation for this change.

[3] Matson, G.C., and Berry, E.E., 1916, The Pliocene Citronelle formation of the Gulf Coastal Plain [Part 1]; The flora of the Citronelle formation [Part 2}, IN Shorter contributions to general geology, 1916; U.S. Geological Survey Professional Paper, 98-L, p. 167-208.



Solid Waste Management Units (SWMUs)	
SWMU	**Name**
13	Waste Oil Storage Area
14	South Spend Carbon Storage Area
15	North Spent Carbon Storage Area
16	Vehicle Wash Pad
17	Old Maintenance Shop
18	New Maintenance Shop
19	Filling Station
20	Old Peeler Area
21	Treatment Area No. 1
22	Large PCP Drip Track
23	CCA Drip Track
24	Large PCP Tanks
25	CCA Tanks
26	Treatment Area No. 2
27	Small PCP Drip Track
28	Small PCP Tanks
29	Wastewater Treatment Facilities (WWTF)
30	Groundwater Treatment System
31	Storm Water Containment Basin
32	Carbon Concrete Ditch
33	Boiler Blowdown/Process Skimmer
34	Cylinder Sludge Drum Storage
35	Dumpsters
36	Surge Tanks
37	Drainage Ditches
38	PCP Spill
39	Sump

LEGEND

- Treated Wood Storage Areas (AOC A)
- Closed RCRA-Regulated units (former SWMUs)
- Drainage Ditches (SWMU 37)
- Treatment Area
- Vehicle/Equipment Maintenance Area
- Landfill
- City of Wiggins Well
- International Paper Property Boundary
- Baldwin Pole Mississippi Property Boundary
- Church House Branch (AOC B)
- PCP Spill (SWMU 38, approximate location)

0 ft 350 ft 700 ft

Site Aerial © Google 2014
Image Date: 3/13/2013

INTERNATIONAL PAPER

Former Wood Treating Facility, Wiggins MS
1633 South 1st Street, Wiggins MS

Project No. 02.20000006.21

EARTHCON®
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SWMUs, AOCs, and Control Room Locations

DRAWN:	CHECKED:	DATE:	FIGURE:
SJT	NDK	09/01/2017	1